

Navy Environmental Quality Fact Sheet



Do you landfill compostable material?

Would you like to improve this process in the following areas?

- **Meeting environmental compliance regulations** -- Reduce solid waste disposal. Applicable regulatory areas includes DOD Solid Waste Measure of Merit.
- **Improving workers' safety and health** -- Reduce odor and vector problems typically associated with composting. Can be located close to a building.
- **Increasing productivity** -- Reduce landfill material while providing a useable product.
- **Saving money** -- Reduce landfill disposal fees and transportation costs while creating compost for landscaping.



In-vessel composting system

Conventional composting methods have many limitations and disadvantages that limit this recycling option from being widely used. The in-vessel composting system eliminates many of these limitations allowing for a larger throughput with fewer problems. The quicker compost time is achieved by enclosing the raw materials in a controlled environment. Temperature, humidity, and water can be adapted to each compost batch for optimum results. Biofilters reduce the impact of air emissions. The throughput may be of a continuous or batch nature. A mixing/staging area is usually required to pre-treat the organic wastes before placement in the in-vessel composting equipment. In-vessel equipment typically contains a container unit, biofilters, positive fresh air delivery, negative process-air removal, computerized process control and data logging. Benefits include a larger throughput due to shorter retention times, fewer odor problems, fewer vector problems (rodents, flies, wind), no disposal cost of raw materials and a potentially useable/sellable product. This equipment is available through the Navy Pollution Prevention Equipment Program.

How can you achieve these improvements?

Implement In-Vessel Composting System Equipment.

How does this equipment work?

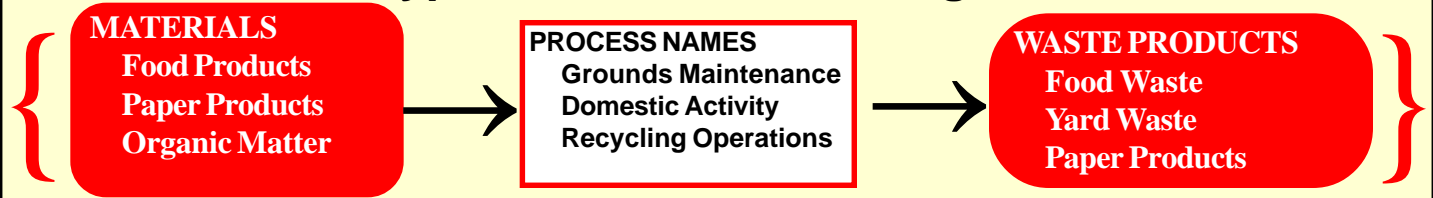
The in-vessel composting system utilizes a controlled environment (temperature, humidity, water) to shorten compost time with fewer complications.

How will this equipment save you money?

The typical cost to implement is \$370,000 for a 6 tons/day capacity and pays for itself within two years. A 2 ton/day capacity system would pay for itself within four years.



Typical Process Flow Diagram



How can this technology eliminate or reduce pollution?

This technology can dramatically reduce the amount of solid waste landfilled. Implementation will result in the following pollution reductions:

- Reduction of solid waste transported off-site and landfilled
- Reduced odor from typical compost operations
- Reduction of vector problems (rodents, flies, wind) from typical compost operations

Which shops can benefit most from this technology?

This technology can be used in any process that generates solid waste that is compostable. Typical shops include:

- Grounds Maintenance
- Food Preparation and Handling
- Recycling Operations

Take action: How can you implement this technology?

- **Activity Shop & Work Center Personnel.** If you work at an activity, contact your Pollution Prevention Program Manager. The P2 Program Manager can provide more information and conduct a more detailed analysis, and may be able to provide this equipment at no cost to a Shop or Work Center.

- **Activity Pollution Prevention Manager.** Request funding and installation assistance for this technology through the Navy P2 Equipment Program. Depending on the application, the Environmental Requirements Cookbook may contain project submission information for annual budget submittals to your major claimant.

- **For Additional Technical Information.** More information about this technology can be found in the Joint Service P2 Opportunity Handbook Datasheet Number 7-II-15 (Web: <http://www.nfesc.navy.mil/>).

Achieving Environmental Compliance Through Pollution Prevention

Everyday the Navy faces the challenge of operating and maintaining the fleet while complying with environmental regulations. This burden can be reduced by implementing pollution prevention technologies and methods to reduce compliance requirements. This Fact Sheet is one in a series designed to encourage activities to implement pollution prevention technologies and methods. The overall goal of this series is to promote sustained environmental compliance at the lowest life-cycle cost.

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